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PREPARATION AND USE ~~OF SOLIDIFIED OILS~~

FIELD AND BACKGROUND OF THE INVENTION

This application is a 371 of PCT/IL99/00564, filed 10/25/1999, which claims the priority of Israel 126741, filed 10/25/1998.

The present invention relates to a method of solidifying at least one oil by the addition of at least one solid fat and, more particularly, to a method of forming a semi-sold paste containing a high concentration of an oil which is normally liquid. The present invention further relates to a soft solid mixture which typically includes 50 % or more ethyl esters of natural fatty acids and 50 % or less solid fat and, more particularly, to a semi-solid mixture containing fish oil or another source of fat soluble vitamins, including, but not limited to, purified vitamin E. The present invention further relates to a method of using an oil for purposes including, but not limited to, nutritional supplementation, cosmetic treatment, and medical treatment.

Most fats which are nutritionally important substances exist as fluid oils. Their handling, storage and application is therefore limited to containers (e.g., cooking oil) or capsules (e.g., vitamin E). In principle, such oils can be handled in a solidified form by the addition of large excess of solids like starch, calcium carbonate, lactose etc., which is a common practice in the pharmaceutical industry. After addition of solids, the oils may be pressed into tablets. Owing to the physical size limit of tablets or capsules designed to be consumed by humans, high dose therapy with purified vitamin E, or with substances such as wheat germ oil or fish oil has been problematic because treatment regimens require daily consumption of tens of tens of tablets or capsules. Much of the problem stems not from the efficacy of the therapeutic oil, but from poor patient compliance with treatment protocols requiring intake of large numbers of tablets or capsules each day. The root of this compliance problem lies in the fact that preparation of soft-solid mixtures which contain dietary oil at a concentration above 50 % while the solidifying agent is biologically compatible, are not taught by prior art.